



Kansas Administrative Regulations
Kansas Department of Health and Environment

Notice to Reader

The following regulations represent an electronic facsimile of Kansas Administrative Regulations, promulgated by the Kansas Department of Health and Environment and published by the Kansas Secretary of State. While every effort has been made to assure the accuracy, these electronic copies do not represent the official regulations of the state. The official regulations are the bound copies printed by the Secretary of State.

Where possible KDHE will append changed regulations to the appropriate article. Once again, the lack of any attachments should not be construed as meaning there are no revisions.

Nothing contained herein should be construed as legal advice by KDHE. If you are not an attorney, you should secure competent counsel to interpret the regulations and advise you.

Public Information Office
Kansas Department of Health & Environment

Notes

The *Kansas Register* notes the following changes:

used for window and door sash, grills, gates, etc.; materials and method used in anchoring or tying walls together where they are made up of two or more independent walls, materials for concrete plaster, mortar, etc. (Authorized by K.S.A. 17-1324; effective Jan. 1, 1966.)

28-9-6. Individual mausoleums; approval of plans, specifications and testing of materials. In the case of individual mausoleums, the permits issued by the department shall be a license to manufacture. Any deviations from the approved plans and specifications must be approved in writing by the engineer for the department. Inspections will be made of the manufacturing processes and of field installations with special attention being given to all factors which affect the permanence of the structures. When necessary to determine the permanence, all or any part of one or more mausoleums, or test specimens from the mixes used, shall be delivered to a laboratory for testing. The transportation and testing shall be an expense of the manufacturer and shall be done as directed by the engineer for the department. Permanent identification of the manufacturer shall be stamped in an accessible place on the cover and the vault along with the date of manufacture. Such other records shall be kept as are found necessary by the department. (Authorized by K.S.A. 17-1324; effective Jan. 1, 1966.)

28-9-7. Individual mausoleums; replacement of structure or parts thereof. Whenever the failure of one of these mausoleums causes offensive odors or effluvia to arise therefrom, and such failure comes to the attention of the department, the manufacturer shall be required to replace or repair the structure or the defective portion. (Authorized by K.S.A. 17-1324; effective Jan. 1, 1966.)

28-9-8. Individual mausoleums; revocation of permit. The permit may be revoked for cause upon notice to the manufacturer by the secretary of the board. (Authorized by K.S.A. 17-1324; effective Jan. 1, 1966.)

Article 10.—SANITARY CONDITIONS AROUND RESERVOIRS

28-10-1 to 28-10-13. (Authorized by K.S.A. 1965 Supp. 65-187; effective Jan. 1, 1966; revoked Jan. 1, 1969.)

28-10-14. **Reserved.**

A. Sanitation Zone Boundaries

28-10-15. Boundaries of Cedar Bluff reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the

DRAWING 69-1

Official Map Cedar Bluff Reservoir Sanitation Area

Cedar Bluff reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-1 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-16. **Boundaries of Cheney reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Cheney reservoir sanitation zone are hereby set and

DRAWING 69-2
Official Map Cheney Reservoir Sanitation Zone

established as shown on the official map drawing 69-2 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-17. **Boundaries of Council Grove reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the

DRAWING 69-3
Official Map Council Grove Reservoir Sanitation Zone

Council Grove reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-3 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-18. **Boundaries of Elk City reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds

DRAWING 69-18
Official Map Elk City Reservoir Sanitation Zone

in affected counties.) The boundaries of the Elk City reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-18 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-19. **Boundaries of Fall River reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Fall Riverreservoir sanitation zone are hereby set and established as shown on the official map drawing 69-4 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject

DRAWING 69-4
Official Map Fall River Reservoir Sanitation Zone

to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-20. **Boundaries of Glen Elder reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the

DRAWING 69-5
Official Map Glen Elder Reservoir Sanitation Zone

Glen Elder reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-5 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the

control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-21. **Boundaries of John Redmond reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the John Redmond reservoir sanitation zone are

revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Kanopolis reservoir sanitation zone are hereby set and

DRAWING 69-6
Official Map John Redmond Reservoir Sanitation Zone

hereby set and established as shown on the official map drawing 69-6 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-22. **Boundaries of Kanopolis reservoir sanitation zone.** (Official map filed with

DRAWING 69-7
Official Map Kanopolis Reservoir Sanitation Zone

established as shown on the official map drawing 69-7 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-23. **Boundaries of Kirwin reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Kirwin reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-8 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage dis-

posol, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to

posol, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-25. Boundaries of Milford reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Milford

DRAWING 69-8
Official Map Kirwin Reservoir Sanitation Zone

be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-24. Boundaries of Lovewell reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Lovewell reservoir sanitation zone are hereby set and estab-

DRAWING 69-10
Official Map Milford Reservoir Sanitation Zone

DRAWING 69-9
Official Map Lovewell Reservoir Sanitation Zone

lished as shown on the official map drawing 69-9 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage dis-

reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-10 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices

and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-26. Boundaries of Norton reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Norton

established as shown on the official map drawing 69-12 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be

DRAWING 69-11
Official Map Norton Reservoir Sanitation Zone

reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-11 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-27. Boundaries of Pomona reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Pomona reservoir sanitation zone are hereby set and

DRAWING 69-12
Official Map Pomona Reservoir Sanitation Zone

considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-28. Boundaries of Toronto reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Toronto reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-13 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by

DRAWING 69-13
Official Map Toronto Reservoir Sanitation Zone

K.S.A. Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-29. Boundaries of Tuttle Creek reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of Tuttle Creek reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-14 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

DRAWING 69-14
Official Map Tuttle Creek Reservoir Sanitation Zone

28-10-30. Boundaries of Webster reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Webster reservoir sanitation zone are hereby set and

DRAWING 69-15
Official Map Webster Reservoir Sanitation Zone

established as shown on the official map drawing 69-15 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-31. Boundaries of Wilson reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Wilson reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-16 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be con-

68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

DRAWING 69-16
Official Map Wilson Reservoir Sanitation Zone

sidered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-

DRAWING 69-17
Official Map Perry Reservoir Sanitation Zone

28-10-32. Boundaries of Perry reservoir sanitation zone. (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Perry reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-17 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone

regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-33. **Boundaries of Marion reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Marion

DRAWING 69-19
Official Map Marion Reservoir Sanitation Zone

reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-19 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-34. **Boundaries of Clinton reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Clinton

DRAWING 69-21
Official Map Clinton Reservoir Sanitation Zone

reservoir sanitation zone are hereby set and established as shown on the official map drawing 69-21 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-35. **Boundaries of Melvern reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the Melvern reservoir sanitation zone are hereby set and

DRAWING 69-20
Official Map Melvern Reservoir Sanitation Zone

established as shown on the official map drawing 69-20 approved by the Kansas state board of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1969; amended Jan. 1, 1970.)

28-10-36. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970; revoked May 10, 1996.)

28-10-37. **Boundaries of El Dorado reservoir sanitation zone.** (Official map filed with revisor of statutes, Topeka, and register of deeds in affected counties.) The boundaries of the El Dorado reservoir sanitation zone are hereby set

of health: *Provided*, That no land located within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code which contains provisions for the control of sewage disposal, water supplies and refuse handling practices and is adopted under the provisions of K.S.A. 19-3701 through 19-3708 shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-38. **Boundaries of Big Hill reservoir sanitation zone.** (a) Official map, drawing

DRAWING 69-23
Official Map El Dorado Reservoir Sanitation Zone

and established as shown on the official map drawing 69-23 approved by the Kansas state board

DRAWING 72-25
Official Map Big Hill Reservoir Sanitation Zone

72-25R, approved by the secretary of the Kansas department of health and environment on No-

vement 4, 1983, and as filed in the register of deed's office of Labette County, is incorporated by reference in this rule and regulation.

(b) The boundaries of the Big Hill reservoir sanitation zone shall be set and established as shown on the official map, drawing 72-25R.

(c) Land within the corporate limits of any city or land subject to a county sanitary code adopted under the provisions of K.S.A. 19-3701 *et seq.*, and any amendments thereto, located within the boundaries shown on the official map, drawing 72-25R, shall not be part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by and implementing K.S.A. 65-187; effective Jan. 1, 1973; amended, T-84-40, Dec. 21, 1983; amended May 1, 1984.)

28-10-39. Boundaries of Hillsdale reservoir sanitation zone. (Official map filed with the revisor of statutes, Topeka, and register of

28-10-40 to 28-10-41. (Authorized by K.S.A. 1972 Supp. 65-187; effective Jan. 1, 1973; revoked May 10, 1996.)

28-10-42 to 28-10-74. **Reserved.**

B. General

28-10-75. Scope and content. These regulations fix minimum standards for water supply, sewage disposal, and refuse disposal facilities to be provided upon certain lots and tracts of land within sanitation zones; establish procedures to be followed by owners in preparing and submitting the required sanitation plans; set fees to be paid to the county for review and approval of sanitation plans; establish procedures for hearing of appeals by aggrieved property owners from decisions of reservoir sanitation officers; prescribe the records and reports to be kept by reservoir sanitation officers; and establish the criteria to be used in granting hardship exceptions. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-76. Lands exempted from regulations. These regulations shall not apply to lots located in subdivisions platted and approved by the board of county commissioners prior to August 1, 1965, that are used as building sites for single family residences; to public lands owned by the state or federal government; to land located within the corporate limits of any city; to lots containing more than three (3) acres of land exclusive of roads and streets that are used as building sites for single family dwellings; to land used solely for agricultural purposes as defined in K.S.A. 1969 Supp. 65-185; or to land subject to regulation by legally adopted county sanitary codes that provide for the control of subsurface disposal of sewage, on-lot water wells, and disposal of refuse. (Authorized by K.S.A. 1969 Supp. 65-185, 65-187, 65-189e; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-77. Exceptions for undue hardship. (a) In order to qualify for hardship exceptions provided for in the amended sanitation zone law, the lot owner shall submit in writing, a statement indicating the specific regulation or requirement he desires to have waived; together with information documenting the following conditions: (1) that compliance with the provisions of the act and any regulations established thereunder is

DRAWING 72-24
Official Map Hillsdale Reservoir Sanitation Zone

deeds in affected counties.) The boundaries of the Hillsdale reservoir sanitation zone are hereby set and established as shown on the official map, drawing 72-24 approved by the Kansas state board of health: *Provided*, That no land within the corporate limits of any city located within these boundaries, or any land subject to a county sanitary code adopted under the provisions of chapter 19, article 37, Kansas Statutes Annotated shall be considered to be a part of the sanitation zone or subject to any sanitation zone regulations. (Authorized by K.S.A. 1972 Supp. 65-187; effective Jan. 1, 1973.)

physically impossible or unduly costly; (2) that the requested exception will not violate any local regulation or requirement; (3) that no public health hazard will be created; (4) the remedial measures to be taken for correcting any insanitary conditions that may occur; and (5) that a covenant running with the land has or will be, inserted in the deed requiring all future owners to connect all buildings erected on the lot to any public water supply and/or sewerage systems whenever such systems become available, and cease using the nonconforming facilities.

(b) The construction exceptions granted under this regulation shall not be transferable.

(c) Any exception granted under this regulation shall become null and void unless the owner obtaining the requested exception starts the construction for which the sanitation plan was prepared and approved within six months after the exception is granted.

(d) All requests for exceptions shall be submitted to the reservoir sanitation officer and he shall forward them with his comments to the department. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189f; effective Jan. 1, 1970.)

28-10-78. Appeal and hearing procedures. Appeals of land owners aggrieved by any decision of a reservoir sanitation officer denying approval of plans shall be heard before the chief engineer of the state board of health or his authorized representative. All requests for hearings shall be submitted in writing to the chief engineer of the state board of health within 20 days after denial of a sanitation plan by the reservoir sanitation officer. The chief engineer shall set a date for the hearing within 15 days after receipt of the request. The landowner shall set forth in his request the main points wherein he is aggrieved by the decision of the reservoir sanitation officer. The landowner and the reservoir sanitation officer shall be heard at the hearing and all testimony shall be recorded on tape. The testimony will not be transcribed unless future court action is involved. Within 10 days after the hearing the chief engineer of the state board of health shall render a decision approving, modifying or overruling the decision of the reservoir sanitation officer and shall notify the landowner and the reservoir sanitation officer in writing of his decision. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-79. Submission and approval of sanitation plans. Three copies of all sanitation plans required by the sanitation zone law—K.S.A. 1969 Supp. 65-184 through 65-189 shall be submitted to the reservoir sanitation officer of the sanitation zone in which the land is located. The reservoir sanitation officer shall forward copies of all sanitation plans serving subdivisions, two or more lots, two or more family dwelling units, and any commercial or public building to the state department of health for approval. Following approval by the department the reservoir sanitation officer shall review the plans for compliance with local requirements and approve or disapprove them. All sanitation plans shall show both plan and profile views of all major structures. The drawings shall be drawn to a suitable scale, on standard 17 2 22 inch sheets or larger. If larger size sheets are used they shall be placed in folders suitable for storage in standard 8½ 2 11 file cabinets.

An engineering report or narrative, fully describing and explaining the design and plan for operation of the facilities, shall accompany each sanitation plan serving two or more lots or properties.

A receipt showing payment of the required fee to the county treasurer shall be attached to each sanitation plan submitted to the reservoir sanitation officer. Sanitation plans that include water and/or sewerage systems that serve (a) two or more lots, (b) two or more services such as multi-family dwellings, trailer parks, mobile home parks, and (c) non-residential facilities open to the public shall not be approved by the reservoir sanitation officer until the plans have been reviewed by the state department of health and the department has certified to the reservoir sanitation officer that these public systems are acceptable and approved. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c; effective Jan. 1, 1970.)

28-10-80. Requirements for subdivision of land. (a) Approved plats. Any land, located within a sanitation zone, that is subdivided into two or more lots, must be platted, and approved by the board of county commissioners.

(b) Preliminary engineering study and cost estimate. Owners of land within a sanitation zone desiring to subdivide their land into ten or less lots, shall file with the reservoir sanitation officer, three copies of the required engineering study which shall include all the data and information required for approval of the sanitation plan such

as, but not limited to, the location and results of any exploratory drilling operations undertaken to determine the availability and quality of ground water, if private wells are to be used as a source of water supply; the location and results of all soil testing undertaken to determine the suitability of the soil for use of septic tank-tile field systems, if such systems are proposed for disposal of sewage; statements from purveyors of services specified in the plan, such as refuse collection, pumping out of septic tanks, or hauling of water, indicating their ability and willingness to provide the specified service under a bonded contract; and maps of the subdivision showing location of all existing or proposed water and sewer lines, if such public systems are to be provided.

Owners of land located within a sanitation zone desiring to subdivide their land into more than ten (10) lots shall file with the reservoir sanitation officer three copies of the proposed plat, the required preliminary engineering report, plan and cost estimate for providing water, sewerage and refuse disposal service. The preliminary engineering report, plan and cost estimate shall be prepared by a licensed professional engineer and an imprint of his professional engineer's seal shall be placed on all copies of the engineering report, plan and cost estimate.

The preliminary engineering plan shall contain scaled and dimensioned drawings of the subdivision or plat showing location of all lot lines, proposed and existing streets, rights of way and easements; water mains, storage tanks, sewers, manholes, lift stations, and treatment plants; and the topography of the plat by means of appropriate contour maps.

The engineering report shall discuss the proposed development in detail, giving all pertinent facts used in developing the preliminary engineering plans, including plan of operation and a cost analysis for the construction and operation of the sanitation facilities and services.

The cost estimate shall be broken down into classes of work to be performed and shall show estimated quantities of each type of work and per unit cost.

The reservoir sanitation officer shall forward all copies of the plat, preliminary engineering plans, engineering report, and cost estimates to the state department of health for review and approval. The reservoir sanitation officer shall include in his letter of transmittal, or append to it, any additional

information he believes the department should consider in its review of the plans and reports. Following review of the preliminary engineering plan the department shall advise the reservoir sanitation officer as to the acceptability of the preliminary plans.

(c) Final engineering plans and specifications. Approval of the preliminary engineering plans by the department shall in no way be considered official approval of the final plans required by law for all public water supply and sewerage systems. Such final plans and specifications shall be submitted directly to the state department of health by the consulting engineer and no construction of such systems shall be started or contracts let for such construction until the final plans and specifications are approved. The department shall inform the reservoir sanitation officer of its approval of any plans and specifications for a public water supply and/or sewerage system located within a sanitation zone. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c, 65-189d; effective Jan. 1, 1970.)

28-10-81. Requirements for construction. The sanitation plan shall be submitted to, and approved by the reservoir sanitation officer prior to starting construction of any buildings on land located within a sanitation zone except the following: Single family residences located on lots containing 3 acres or more of land exclusive of roads, streets and other public rights-of-way and buildings used for agricultural purpose as defined in the act. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c; effective Jan. 1, 1970.)

28-10-82. Requirements for sale or contract to sell land within sanitation zone. Every developer selling by deed or contract lots or tracts of land within any subdivision located in a sanitation zone shall furnish the sanitation officer with a copy of the informational statement he proposes to insert in the deed or sales contract for any lot he sells as required by the act.

Owners, other than developers, shall furnish the reservoir sanitation officer with a copy of the statement they have included in the deed or sales contract for any land they have sold within a sanitation zone. Such copy shall be filed with the reservoir sanitation officer within ten days after execution of any sales contract or conveyance of title. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c; effective Jan. 1, 1970.)

28-10-83. Duties of reservoir sanitation officer. The reservoir sanitation officer shall (1) accept, review, and approve or disapprove all sanitation plans in accordance with procedures set forth in the act and in these regulations, (2) report all violations of the law and the rules and regulations to the county attorney, (3) keep complete and accurate records of all correspondence and actions taken in connection with the acceptance, review and approval of sanitation plans, subdivision plats, sale of lots and inspection of sanitation facilities, (4) furnish the state department of health with a quarterly report listing the following: all properties for which a sanitation plan has been received and the status of such plan; all properties where construction has been started; all properties where construction has been completed; all subdivisions for which plats have been filed and the status of the plat; and all fees paid into the county treasurer by owners for sanitation plan review and inspection service, (5) make inspections of construction of facilities approved to assure compliance with the sanitation plan. (These inspections shall be made jointly with representatives of the state department of health whenever a public water or sewer system is involved), and (6) consult with the state department of health when any unusual or special problems arise. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c; effective Jan. 1, 1970.)

28-10-84. Fees for examination of sanitation plans and inspection of construction. Each sanitation plan submitted to the reservoir sanitation officer for review and approval shall have attached a receipt showing payment to the county treasurer of the county in which the lot or building site is located, the appropriate fee set forth below. The reservoir sanitation officer shall not accept any sanitation plan until such receipt of payment is attached.

Type of property served by sanitation plan	Amount of fee
A single-family dwelling or cabin	\$25.00
A duplex or apartment serving two families	50.00*
A commercial building, trailer park, etc.	100.00
An industrial development	100.00
A multiple lot housing development or subdivision	100.00

*An additional \$10 shall be charged for each additional family unit.

Fee shall not be refunded but plans may be revised and resubmitted upon payment of a re-submission fee of five dollars (\$5.00). (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-85. Preparation of sanitation plans. (a) General. All sanitation plans shall include plans for the delivery of water, the collection, treatment and/or disposal of sewage, and the disposal of refuse. All sanitation plans shall be submitted to the reservoir sanitation officer for review and approval; following payment of appropriate fee to the county treasurer.

(b) Specific requirements for sanitation plans for systems serving subdivisions containing ten or less lots. Sanitation plans for subdivisions containing ten or less lots shall (1) be full and complete with all functional details shown in both plan and profile, (2) be drawn to appropriate scale to show details, and (3) be fully dimensioned. If the plan includes the construction and installation of a complex structure the reservoir sanitation officer, upon advice of the state department of health, may require the plans to be prepared and the construction supervised by a licensed professional engineer.

(c) Specific requirements for sanitation plans for systems serving subdivisions containing more than ten (10) lots. The sanitation plan shall be developed and the engineering studies shall be prepared by a licensed professional engineer. (Authorized by K.S.A. 1969 Supp. 65-187, 65-189c; effective Jan. 1, 1970.)

28-10-86. Acceptable methods for providing water. (a) General requirements. Properties abutting on a public water system operated by a city, a water district or a public water utility will be required to use such supply unless an exception as provided for in law is granted by the department.

(b) Single family use. Whenever water service from an existing public water supply is not available, or cannot be made available at a reasonable cost to a lot that is to be used as a building site for a single family dwelling, an on-site drilled or driven well may be used. If a public water supply is not available and a well cannot be developed, a storage tank may be used. Such well or storage tank shall be located and constructed in conformity with standards set forth in part C of these regulations and the plans and specifications for such well or storage tank shall be filed with and approved by the reservoir sanitation officer.

(c) Multi-family use. When the water supply is to serve two or more lots, or multi-family dwell-

ings on a single lot, or a trailer park, motel, or any other commercial establishment serving multi-family groups, and an existing public water supply system is not available, or cannot be made available at reasonable cost, a drilled or driven well constructed and located with the guidance of the recommended practices of the state department of health set forth in their bulletin "Recommendations for Public Water Well Location, Construction and Disinfection," a copy of which is on file with revisor of statutes, may be used. The plans must be submitted to and approved by the state department of health. Submission to the state department of health shall be made by the reservoir sanitation officer. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-87. Acceptable methods of disposing of sewage. (a) General. Whenever sewerage service is available from a public sewerage system, or can be made available at a reasonable cost to a lot, the sanitation plan for such lot shall provide for connection to such public sewerage system.

(b) For single family dwellings. Whenever sewerage service is not available by means of a public sewer, and cannot be made available at a reasonable cost, sewage from such dwellings may be disposed of by means of a properly located and constructed septic tank-tile field system, provided the lot meets the requirements for use of such systems set forth in part C of these regulations.

If the lot does not meet the requirements for use of a septic tank-tile field system, a septic tank sand filter system or a waste stabilization pond, then a properly designed and constructed holding tank may be used, if (1) a reliable method for pumping out the tank and transporting the pumpings to a sewage treatment plant approved by the state department of health is provided, and (2) a surety bond guaranteeing provision of the pumping service is deposited with the reservoir sanitation officer.

The amount of the performance bond shall be set by the board of county commissioners. The performance bond shall not be required if the service is provided by a duly constituted sewer district or a similarly constituted public authority. Other methods may be used if written approval for such use is obtained from the department.

(c) For multi-family use. Whenever sewerage service for a multi-family dwelling, a commercial

building, trailer park, or mobile home park is not available by means of a public sewerage system, and cannot be made available at a reasonable cost, a private sewerage system that provides: (1) adequate and reliable means for treating the sewage, (2) a satisfactory point for discharge or disposal of the treated sewage, and (3) a reliable plan of operation, may be used. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-88. Acceptable refuse handling practices. (a) Storage at single family dwellings. Garbage and trash shall be stored in metal or plastic containers of ample size provided with tight fitting lids. Ring stands, racks, posts or similar devices shall be provided that will hold the cans in place and prevent their being overturned by animals or wind.

(b) Storage at multi-family dwellings, commercial establishments, trailer parks, etc. Garbage and trash shall be stored in standard galvanized garbage cans; in Dempster-Dumpster bulk containers or similar metal containers with tight fitting lids or covers.

(c) Refuse collection at single family dwellings. The refuse shall be removed from the premises at least once each week and transported to the disposal site in the storage container or in an approved type truck such as a van, or packer-type refuse collection vehicle.

Whenever refuse collection and disposal service is available through a community sponsored collection system, owners of single family residences shall use such community collection service.

Whenever a community sponsored or similar organized refuse collection service is not available, owners of single family dwellings may contract with a private collector for collection of refuse provided the collector is approved by the reservoir sanitation officer to collect refuse, or the owner may take his own refuse to the disposal site if he does it in a manner that will prevent the littering of the highway or roads and the escape of offensive odors. Transportation of the refuse in the storage containers may be permitted if the lids are kept tightly fitted over the cans.

(d) Refuse collection at multi-family dwellings, commercial establishments, trailer parks, etc. All refuse shall be removed from the storage containers weekly or more often if necessary and transported to the disposal site in a closed vehicle.

Whenever this type of service is provided and available from a community sponsored refuse collection system, such service shall be used by owners of these kind of developments.

Whenever service is not available from a community operated refuse collection system, the owner may contract with a private collector for collection of the refuse, provided the collector is certified by the reservoir sanitation officer to collect refuse.

(e) Disposal of refuse. All refuse collected at or removed from any property within a sanitation zone shall be transported to and disposed in an existing disposal site. No new disposal site shall be started in any sanitation zone without approval of the location and plan of operation by the state department of health.

Owners of single family dwellings, located in isolated areas where a community collection service is not available may be permitted to use properly located and designed burial pits. Such burial pits shall not be used for any type of development other than a single family dwelling. (Authorized by K.S.A. 1969 Supp. 65-187; effective Jan. 1, 1970.)

28-10-89 to 28-10-99. **Reserved.**

C. Standards

28-10-100. Water supply requirements and standards for supplies serving two or more properties, two or more families, and/or the general public. (a) Permits and certificates. Every city, water district, improvement district, or other public agency that provides or proposes to provide a water supply system to serve two or more single family dwellings or any establishment open to the general public located within a sanitation zone shall obtain a water supply permit from the state department of health as required in K.S.A. 65-163 prior to constructing any such system in a sanitation zone.

Any private individual, company or corporation providing or proposing to provide a water supply system to serve two or more properties, two or more single family dwellings, or any establishment open to the general public, any of which are located within a sanitation zone, shall obtain a certificate of convenience from the corporation commission as required in K.S.A. 66-104 and a water supply permit from the state department of health as required by K.S.A. 65-163.

(b) Construction. All water supplies serving two or more properties, two or more families, and/or the general public, shall be located, constructed, and operated in conformity with the provisions of Bulletin 1-6 "Policies Governing the Design of Public Water Supply Systems," published by the state department of health, and the department's "Recommended Standards for Location, Construction and Disinfection of Wells Used for Public Water Supplies," copies of which are on file with the revisor of statutes, unless the department finds that compliance with any specific requirement is unnecessary in a particular situation and so informs the reservoir sanitation officer and the owner in writing. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-101. Drilled or driven wells used as a water supply for a single family dwelling. Drilled and driven wells used as a source of water supply for single family dwelling shall meet the following standards:

(a) Minimum distance from sources of contamination. The well shall be separated from sources of contamination by distances equal to, or greater than those shown in Table I.

Area	TABLE I	Minimum Separation
Subsurface absorption field for septic tank effluent		50 feet
Pit privy		50 feet
Septic tank		50 feet
Barnyards, stables, manure piles, animal pens, etc.		50 feet
Streams, lakes and ponds		25 feet
Sewer lines, unless constructed of cast iron or other equally tight construction		50 feet
Sewer lines constructed of cast iron or other equally tight construction		10 feet

(b) Protection against contamination. Every well used as a source of water supply for a single family dwelling shall be located at least 25 feet from the property line of the lot and the lot owner shall not permit any portion of the lot to be used for any purpose that will create any condition that is dangerous to the water supply.

(c) Casing. All wells shall be cased with durable water-tight casing to a depth of 10 feet or to the top of the impervious formation above the water-bearing formation, whichever is the greater. The top ten feet of the casing shall be fabricated

of wrought iron, steel, NSF approved polyvinyl chloride plastic or other NSF approved materials and shall comply with the weight and thickness specifications given in Table II.

TABLE II

Minimum standards of dimensions and weights for wrought iron or steel well casing

Nominal size in inches	Wall thickness in inches	Weight in lbs. per foot of pipe plain ends	Weight in lbs. per foot of pipe thread & coupling
3½	0.125	4.51	4.60
4	0.134	5.53	6.65
4½	0.142	6.61	6.75
5½	0.154	8.79	9.00
6	0.164	10.22	10.50
8⅝	0.188	16.90	17.50

Minimum standards of dimensions and weights for polyvinyl chloride (PVC) plastic pipe

Nominal size	Wall thickness in inches	Weight in lbs. per foot
4 inches	0.237	1.364
6 inches	0.280	2.403

No used, reclaimed, rejected, or contaminated pipe shall be used for casing any well. New pipe, pulled from water well test holes immediately following completion of drilling operation, shall not be considered "used or contaminated." The casing of all wells shall project at least 6 inches above the floor of the pump house or finished ground grade, and at least 24 inches above the highest flood level of record. No casing shall be cut off below ground surface except to install a pitless adapter. The adapter shall extend at least 12 inches above the ground surface. No opening shall be made in the casing below the finished ground surface or the pump house floor except for installation of a pitless adapter unit so designed and fabricated as to prevent soil or water from entering the well. The outside casing shall not be used as a suction pipe for the pump. The casings of wells developed in rock shall be firmly seated in sound rock. If broken or creviced rock formation is encountered above the aquifer the casing should be extended through the creviced formation and seated in sound rock or impervious formation. The diameter of the top 10 feet of the drill hole shall be at least 4 inches larger than the outside diameter of the casing and this annular space shall be filled with cement grout or puddled clay.

(d) Sanitary seal. The top of the well casing shall be tightly sealed into the base of the pump, or a commercial sanitary well seal, designed to

prevent surface water, soil and vermin from entering the well, shall be provided.

(e) Temporary plugs. The top of all well casings shall be tightly plugged or capped to prevent contamination of the well whenever it is not possible to install the pumping equipment and the permanent seal immediately following installation of the casing.

(f) Pumping equipment. Submersible turbine, ejector, horizontal turbine, or water lubricated positive displacement pumping equipment shall be used for lifting water from wells. If other types of pumping equipment are to be used, written approval for their use shall be obtained from the state department of health. Approval in a specific instance shall not be construed as general approval.

(g) Pump mounting. All pumps installed directly over wells shall be mounted on the well casing, the pump foundation, or the pump stand in a manner that will provide an effective water-tight seal around the top of the casing. This requirement shall be deemed satisfied if the casing is extended into the pump base one inch, provided the pump is mounted on a base plate or foundation in such a manner as to exclude dust and insects, and the top of the well casing is at least two feet above the highest known flood water level. When the pump is not mounted directly over the well and the pump suction pipe emerges from the top of the casing, a water-tight sanitary well seal shall be provided between the suction pipe and the casing. A similar water-tight seal shall be provided for the cable conduit when submersible pumps are used.

(h) Construction plans. Plates shown in Kansas state department of health bulletin No. 4-1, "Manual of Recommended Practice for Locating, Constructing and Equipping Water Wells for Rural Homes," may be used as aids in preparing plans for submission to the reservoir sanitation officer if they accurately show the construction to be provided. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-102. Water supply storage tanks for a single family dwelling. Water storage tanks shall be designed and constructed in accordance with the following standards and requirements:

(a) Capacity. The tanks shall hold at least 1,000 gallons of water when filled to within 12 inches below the top of the tank.

(b) Structural materials. The tanks shall be constructed of reinforced precast concrete, reinforced poured-in-place concrete, or metal plate. If any other materials are used, written approval shall be obtained from the chief engineer of the state board of health prior to submission of the plan to the reservoir sanitation officer.

(c) Design. The floor and walls of all precast tanks shall be poured monolithically. The minimum thickness of the walls and floor of precast tanks shall be two (2) inches. The top or lid shall be sealed water-tight to the top of the side walls of the tank with nonshrinking grout or similar sealing compound. A fill pipe, with inside diameter of four (4) inches or more with appropriate threads and cap shall be provided in the top of the lid to facilitate filling of the tank. A 12 2 15 inch curbed manhole, extending at least six (6) inches above the surface of the ground, with a heavy duty metal cover overlapping a minimum of two (2) inches shall be provided. A vent pipe extending 12 inches above the top of the tank shall be provided, shall be turned down and shall be covered with 40 mesh brass, bronze, copper or aluminum screen. The floor and walls of poured-in-place concrete tanks shall have a minimum thickness of 5½ inches, provided the walls are double-formed. If single-form construction is used, the thickness of the walls shall be increased to eight (8) inches. Water stops, of copper or other approved material, shall be used in joints between the walls and floor.

The top or lid shall be provided with a fill pipe and manhole identical with those specified for precast tanks. All openings cut in the wall, top, or floor of concrete tanks for the purpose of installing water service pipes shall be tightly grouted with embico, or a similar type of nonshrinking grout approved by the chief engineer of the state board of health. Metal tanks shall be fabricated of No. 10 gauge steel plate or equal and shall be coated inside and outside with epoxy paint or a similar corrosion-resistant coating formulated for use on water tanks and approved by the state department of health. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-103. Requirements and standards for sewerage systems serving two or more families, two or more lots, or any establishment open to the general public. (a) Permits. The owner or owners of any sewerage system, other than a soil absorption system (septic tank-tile field system) used for disposal or treatment of sanitary sewage from any building or structure located on any lot within the sanitation zone shall obtain a sewage discharge permit from the state department of health prior to starting construction of the system as required by K.S.A. 1968 Supp. 65-165.

(b) Operation. Responsibility for operation of sewerage systems serving properties owned by two or more persons, companies or corporations, shall be vested in a duly constituted sewer district or similar constituted public authority authorized by law to operate sewerage systems, or in a private corporation empowered by charter and by-laws to operate the sewerage system, and assess and collect assessments from all users of the system.

Responsibility for operation of sewerage systems that serve one or more lots or tracts under one ownership may be vested in the owner of the property provided this responsibility shall not be transferred to any person other than the owner without written consent of the reservoir sanitation officer and under such conditions as he may prescribe to insure continuous and reliable operation of the system.

(c) Standards for sewerage systems serving subdivisions. All sewer lines, manholes, lift stations and other components of the sewerage system including the treatment facilities shall be designed, constructed, equipped and operated in conformity with the policies and practices set forth in the Kansas state department of health publication "Policies Governing the Design of Sewerage Systems in Kansas," a copy of which is on file with the revisor of statutes, and no construction shall be started or any contracts let for construction of such systems until the plans have been approved by both the department and the reservoir sanitation officer.

The department may waive compliance with the standards and procedures set forth in the above listed design manual when reliable data are presented to show that compliance with a specific

design practice is not necessary in a particular instance. All such waivers shall be confirmed in writing and shall be sent to the owner and the reservoir sanitation officer.

(d) Waste stabilization ponds. Single cell waste stabilization ponds may be used for treatment of sewage from dwellings or buildings having a design P.E. (population equivalent) of 25 or less. Two-cell ponds will be required for design P.E. of 25 or greater. Two-cell waste stabilization pond facilities shall be designed to provide approximately 60% of the required water surface area in the primary cell and approximately 40% in the secondary cell.

Waste stabilization ponds with effluent discharges to a reservoir must chlorinate the effluent in conformance with Kansas state department of health publication "Policies Governing the Design of Sewerage Systems in Kansas," a copy of which is on file with the revisor of statutes. Discharge of effluents to a dry or intermittent watercourse within a reservoir sanitation zone shall not be permitted unless it is in the judgment of the state department of health that environmental objectives of health and welfare will not be adversely affected. Treated waste effluents shall be piped to an approved location, through a submerged outfall line terminating 10 feet below the reservoir conservation pool elevation or one foot below the 5-year drawdown elevation of the reservoir, whichever is lower, and shall meet any requirements of outfall line location marking.

Waste stabilization ponds serving single family dwellings or small commercial developments requiring an acre or less of water surface area shall meet the following minimum requirements:

(1) The minimum size waste stabilization pond serving a residential dwelling shall have 3000 cubic feet of operating volume. Those facilities serving more than 5 P.E. shall provide an additional 600 cubic feet of operating volume for each P.E. greater than 5.

(2) The waste stabilization ponds must have a minimum separation of 100 feet between the edge of the design water surface and property lines or, in the event the property is bounded on one or more sides by a public roadway, the minimum separation on those sides shall be 50 feet.

(3) The entire waste stabilization pond complex shall be adequately fenced to inhibit entrance

of unauthorized persons. A gate shall be provided to allow entrance of a mower.

(4) The waste stabilization pond complex shall be designed for an operational water depth of not less than three feet nor more than six feet.

(5) Where dikes are necessary for single family waste stabilization ponds there shall be a minimum of one foot freeboard provided above the operational water surface elevation.

(6) The dike slopes shall be between three feet and four feet horizontal to one vertical and the minimum top of dike berm width shall be three feet.

(7) The dike slopes above the design water level surface shall be seeded with a densely growing perennial short grass such as blue grass, fescue, or brome.

(8) Waste stabilization ponds shall not be constructed so as to be in contact with the ground water table.

(9) Surface drainage shall be diverted away from the waste stabilization pond facility.

(10) Waste stabilization ponds having two or more cells shall have interconnecting transfer lines and effluent lines (if provided) designed to restrict or limit transfer of surface scum or sludge.

Waste stabilization ponds designed to be "non-overflowing," and serving more than one single family dwelling, and those developed as a community facility shall be considered on an individual basis and subject to the Kansas state department of health publication "Policies Governing the Design on Sewerage Systems in Kansas," a copy of which is on file with the revisor of statutes. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-104. Requirements and standards for septic tank systems serving a single family dwelling.

(a) Disposal of septic tank effluent. All effluent discharges from septic tanks shall be discharged into a properly designed and constructed tile field or a covered sand filter meeting the following standards and requirements.

(b) Site requirements for use of septic tank-tile field systems. Septic tank-tile field systems may be used for disposal of sewage from single family dwellings located on lots or building sites meeting the following requirements:

(1) The building site contains 20,000 or more square feet of land.

(2) The building site contains 10,000 square feet of land, meeting the requirements for the land to be used for an absorption field set forth in these regulations.

(c) Design and construction standards for septic tanks. Septic tanks shall be water tight and may be constructed of precast or poured-in-place, reinforced concrete, vitrified clay, or coated steel. Coated steel tanks shall conform with the requirements of Commercial Standard 177-62. Septic tanks serving single family dwellings shall have liquid capacities, below the level of the outlet, as shown in Table III.

TABLE III

Liquid Capacity of Tank (gallons)

(Provides for use of garbage grinders, automatic clothes washers, and other household appliances)

Number of bedrooms	Minimum tank capacity
2 or less	750
3	900
4	1000

Precast reinforced concrete tanks shall have minimum wall thicknesses of 2½" and shall be reinforced with steel to facilitate handling. Tanks shall be free of cracks or other evidences of structural failure. Poured-in-place concrete tanks shall have minimum wall thicknesses of 5" and shall be reinforced with ¾" bars on 12" centers, both horizontally and vertically. No. 9 reinforcing steel mesh may also be used. Removable slab covers or 20" square manholes shall be provided for all septic tanks. Where the top of the tank is more than 18 inches below the finished grade, a manhole shall be extended up above the top of the tank so that the manhole cover is not more than 18 inches below the finished grade. The invert of the inlet shall be at least three (3) inches above the liquid level in the tank. The inlet shall be provided with a vented tee or baffle extending at least six (6) inches below the liquid level in the tank. The outlet tee or baffle shall extend above the liquid level to within one (1) inch of the top of the tank and below the liquid level to a point equal to 40 percent of the depth of the liquid in the tank.

(d) Design and construction standards for distribution boxes. Distribution boxes shall be provided if the flow from the septic tank is to be divided between two or more lateral lines. The box

shall be carefully set and leveled so that each outlet is at the same elevation. The line between the septic tank and the distribution box shall be of water-tight construction for a distance of at least five (5) feet. Distribution boxes shall be constructed of precast or poured-in-place reinforced concrete or similar impervious material, the minimal inside dimensions shall not be less than twelve (12) inches. Distribution boxes shall be provided with removable covers set flush with the top of the ground.

(e) *Design requirements for absorption fields.* Areas used for absorption fields shall contain at least 10,000 square feet of land with a natural ground slope of less than 10 percent; an average soil percolation rate in excess of one inch in 60 minutes when tested by a licensed engineer or the reservoir sanitation officer using standard soil percolation test procedures; and four feet or more of permeable soil above any clay, shale, or rock formation. The area shall not be subject to frequent or prolonged inundation with flood water. The maximum seasonal elevation of the ground water table shall be at least four (4) feet below the bottom of the trench. No portion of the absorption field shall be located less than 50 feet from a water well or less than 25 feet from the property line of the premise it serves.

TABLE IV

Absorption-area Requirements for Individual Residences

(Provides for garbage grinder and automatic clothes washing machines)

Percolation rate (time required in minutes for water to fall one inch)	Absorption area required in square foot per bedroom
1 or less	70
2	85
3	100
4	115
5	125
10	165
15	190
30	250
45	300
60	330

(f) Construction standards for conventional drain tile lines and trenches. Drain tile shall be laid in trenches 12 to 36 inches wide, no more than 100 feet long. A minimum of six inches of rock ranging in size from ½" to 2½" or coarse graded gravel shall be placed in the bottom of the trench beneath the tile. Following placement of the tile in the trench, the trench shall be backfilled

with rock or coarse gravel to a depth of two (2) inches above the tile. The top of the rock shall be covered with a two-inch layer of straw, hay, or other approved material, and the remainder of the trench filled with earth. The tile lines and bottom of the trench shall be nearly level with no more than four inches of fall in 100 feet. The top of the tile shall be laid not less than 12 or more than 24 inches below the top of the trench. The amount of trench bottom area to be provided shall not be less than shown in Table IV and shall be determined on the basis of the soil percolation rate. The minimum distance between side walls of the trenches shall not be less than six (6) feet at any point. Four (4) inch agricultural drain tile or perforated non-metallic pipe shall be used. Non-standard absorption trenches and seepage beds may be used provided the design conforms to sound engineering practice and is approved by the chief engineer of the state board of health. No non-standard systems shall be approved by reservoir sanitation officers without prior approval from the chief engineer and no individual approval shall be considered general approval.

(g) Design and construction standards for covered sand filters. Covered sand filters may be used where lateral fields, absorption fields or waste stabilization ponds are not feasible. Discharge of effluents to a dry or intermittent watercourse within a reservoir sanitation zone shall not be permitted unless it is the judgment of the state department of health that environmental objectives of health and welfare will not be adversely affected. The sand filters shall be designed and constructed in conformity with Kansas state department of health publication "Policies Governing Design of Small Sewerage Facilities," a copy of which is on file with the revisor of statutes. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-105. Holding tanks; requirements and standards. (a) Site and service requirements. No holding tanks shall be used on any lot where local health or zoning regulations prohibit their use or where reliable pumping service cannot be provided. Discharge of pumpings upon the ground or into the road ditches or streams is strictly forbidden.

Holding tanks may be used for the temporary storage of sewage on any lot used as a building site

for a single family dwelling provided (1) a public sewer is not available and use of a septic tank system is not permitted; and (2) a reliable, sanitary method and procedure for pumping out the tank and transporting the sewage to a sewerage system approved by the state department of health is provided. Such pumping-transportation service shall be provided by (1) a public agency authorized to provide such service, or (2) by a bonded private contractor operating under a standard service contract approved by the reservoir sanitation officer. All service contracts shall (1) prohibit cancellation of the contract without written consent of the reservoir sanitation officer, (2) contain a clause providing for a 60 day advance notice of intention to cancel the contract by either party and notification of the state department of health, and (3) require the fee for the service to be set on a yearly basis, and provide for periodic review and adjustment of fees by owner and the contractor. In case of any disagreement between the owner and the contractor, the reservoir sanitation officer shall set the fee which shall be binding on both parties for one year.

(b) Construction standards for holding tanks. Sewage holding tanks used for interim disposal of sewage from single family dwellings and other small, single lot uses shall be constructed of reinforced precast or pour-in-place concrete or No. 10 gauge or heavier steel plate and shall be watertight and sealed to prevent leakage between the cover or lid and the side walls. The tanks shall have a capacity of 1500 gallons and shall be provided with a manhole or 4" pipe with threaded cap or plug for use in transferring sewage out of the holding tank into the transport tank truck. The holding tank shall be located at a point readily accessible to the transport tank truck.

(c) Standards for equipment used in transporting sewage to public sewer systems. All transport tank trucks used for transporting sewage from holding tanks to treatment plants shall be watertight, maintained in good operational condition, be equipped with pumps and hoses needed to pump sewage out of holding tanks without spillage or leakage, and shall be inspected and approved by the reservoir sanitation officer. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-106. **Refuse storage.** Owners of all premises on which there is located a residential, commercial, or industrial building or structure, shall provide one or more metal or plastic containers with tight fitting lid for the storage of garbage and/or trash. The lid shall be securely fastened to the can by hinge, chain, or similar device to prevent its being lost or separated from the can or container. A ring stand or rack shall be provided at the storage point to prevent the can being upset by dogs or animals unless the storage point is located inside a garage, porch or building. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-107. **Refuse collection standards.** (a) Frequency of collection service. Any person, company, corporation or public agency providing or offering to provide refuse collection or removal service to developers or property owners within a sanitation zone shall provide for the weekly, or more frequent collection or removal of all refuse from the storage containers at single family dwellings and commercial properties, trailer parks and mobile home parks.

(b) Collection equipment. Any person, company, corporation or public agency operating or proposing to operate a refuse collection service serving two or more property owners shall provide an enclosed truck or the equivalent, that will prevent the escape of any refuse from the truck or collection vehicle (packer trucks and vans in good operating conditions are satisfactory for this purpose). All equipment shall be inspected and approved by the reservoir sanitation officer.

Where local regulations require licensure, the operation and the equipment shall comply with all local licensure requirements.

All refuse collected and removed from properties located within a sanitation zone shall be transported to a refuse disposal site approved by the reservoir sanitation officer and specified in the service contract(s) or regulations in the case of public agencies. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 8, 1969; effective Jan. 1, 1970.)

28-10-108. **Refuse disposal standards.** (a) Off-site disposal. All refuse collected or removed from any dwellings, or commercial establishments, trailer parks or mobile home parks shall be disposed of in one of the existing city or county

refuse disposal sites in accordance with written agreements between the refuse collector and the city or county and approved by the reservoir sanitation officer. The city or county shall compact and cover the material as often as is necessary to prevent breeding of flies, rodents and mosquitoes.

No new refuse disposal site shall be established within a sanitation zone without written approval of the location of the site and the plan for operation by the state department of health and local zoning boards where such local boards exist.

(b) On-site disposal for single family dwellings. Owners of single family dwellings located on sites where a community refuse collection and disposal service is not available shall use one of the following methods of disposal for his refuse: (1) haul the refuse in the storage container to the nearest community refuse disposal site; (2) incinerate it in an approved gas fired incinerator; or (3) bury it in a cribbed pit located on the building site and provided with a two-inch plank cover equipped with a tight fitting charging door. Such pit shall be four-six feet deep and no less than 3' 2 3' square exclusive of lining or cribbing. The pit shall be so constructed as to exclude rodents. When the pit is filled to within 24 inches of the top of the ground, a new pit shall be dug and the old pit filled so that there is at least 24 inches of clean earth cover over the refuse. The plans shall clearly indicate where the burial pit is to be located and how it will be constructed. No open backyard trash burners, barbecue pits or similar devices shall be used for disposal of garbage or trash. (Authorized by K.S.A. 1969 Supp. 65-187; effective, E-68-23, Aug. 9, 1968; effective, E-69-6, Jan. 9, 1968; effective Jan. 1, 1970.)

Article 11.—APPROVAL OF LABORATORIES PERFORMING EXAMINATION OF MILK

28-11-1 to 28-11-6. (Authorized by K.S.A. 65-737 (g); effective Jan. 1, 1966; revoked May 10, 1996.)

Article 12.—PATHOGENIC MICROORGANISMS

28-12-1. **Distribution and use of live pathogenic microorganisms.** No pathogenic microorganisms and/or vectors shall be purchased or obtained either interstate or intrastate by persons for use at the highschool level (no ex-